

### **REMARKS**

Claims 29-33, 39-42 and 52 are pending.

The specification has been objected to for failing to provide literal support for “a cell-free cartilage membrane.” The specification provides implicit support for the a cell-free cartilage membrane. For example, at page 7, lines 1-3, the specification describes the cartilage membrane as follows:

The term “cartilage membrane” is intended to mean a membrane with the ability to bind chondroblasts/chondrocytes to at least one surface part of the membrane.

Nowhere in the specification is there reference or teaching of cells forming part of the membrane structure, thus the cartilage membrane is “cell-free,” and implicitly supported as being cell-free. In other words, it is the use of the membrane to which the Examiner refers, and not to the structure of the membrane, which is cell-free by definition in the specification. Accordingly, Applicants request the withdrawal of the rejection to the specification.

#### **Claims 29-33 and 52 Are Novel Over Vibe-Hansen et al**

Claims 29-33 and 52 are rejected under 35 U.S.C. § 102 (b) as being anticipated by U.S. Patent No.5,759,190 (Vibe-Hansen). The Examiner asserts that Vibe-Hansen discloses a cartilage membrane comprising at least one surface part carrying a composition comprising at least one stimulation molecule which induces signal transduction in chondroblast/chondrocytes and which is selected from collagen proteins, proteoglycans and non-collagenous proteins.

Applicants respectfully traverse the rejection. As stated in Applicants’ previous reply, the disclosure of Vibe-Hansen describes a method, instruments and kit for transplantation comprising a hemostatic barrier, transplanted material (e.g., chondrocyte cells) and a covering patch (see Fig. 3C). The hemostatic barrier may be coated with an organic glue, of which Tisseel is given as an example. (Col. 3, line 25-28 and col. 6, lines 45-55). Tisseel is said to contain fibronectin and fibrinogen, among other components. (Col. 6, lines 52-55). The Examiner asserts that because Tisseel contains fibronectin and fibrinogen, it must inherently have the same function as a stimulation molecule in the

present invention. In Applicants' previous response, the Examiner was provided with scientific proof that this assumption is unfounded. Applicant's previous response enclosed excerpts from an article by Mats Brittberg et al. entitled, "The influence of fibrin sealant (Tisseel®) on osteochondral defect repair in the rabbit knee," which was published in the journal *Biomaterials*, Vol. 18 (3) (1997) pp. 235-242. The authors conclude, "...a fibrin adhesive like Tisseel® is not suitable as a scaffold to promote repair of osteochondral defects in the rabbit knee." (emphasis added). Although Tisseel contains fibronectin and fibrinogen, they cannot induce signal transduction in this form as shown by Brittberg et al. A reference cannot inherently have a function it has been proven not to have. Therefore, Tisseel is not a "stimulation molecule" as defined in the present invention and the reference does not anticipate the claims. Accordingly, Applicants respectfully request that the rejection be reconsidered and withdrawn.

#### **Claims 29, 31, 32, and 52 Are Novel Over Athanasiou et al**

Claims 29, 31, 32, and 52 are rejected under 35 U.S.C. § 102 (e) as being anticipated by U.S. Patent No. 5,876,452 (Athanasiou). The Examiner asserts that Athanasiou discloses a cell-free cartilage membrane (implant) and kit comprising at least one surface part carrying a composition comprising at least one stimulation molecule, which is selected from collagen proteins, proteoglycans and non-collagenous proteins.

Applicants traverse the rejection. Athanasiou does not describe a "cell-free cartilage membrane (implant) and kit comprising at least one surface part carrying a composition comprising at least one stimulation molecule," as suggested by the Examiner. Instead, Athanasiou describes an implant with a bioactive agent uniformly incorporated **within** the implant, but not **on the surface** of the implant. (Col. 9, lines 19 – 47). Whereas, the claims require "at least one **surface part** carrying a composition comprising at least one stimulation molecule," and as such, are not anticipated by the disclosure of Athanasiou. Accordingly, Applicants respectfully request that the rejection be reconsidered and withdrawn.

**Claims 29, 31-33, and 52 Are Novel Over Pechence et al.**

Claims 29, 31-33, and 52 are rejected under 35 U.S.C. § 102 (e) as being anticipated by U.S. Patent No. 6,080,194 (Pechence). The Examiner incorrectly asserts that Pachence discloses a cell free cartilage membrane and kit comprising at least one surface part carrying a composition comprising at least one stimulation molecule.

Applicants traverse the rejection. Pachence nowhere discloses a stimulation molecule as required by the claims. Thus, Pachence cannot anticipate the claims because Pachence does not teach or suggest each and every element of the claims. Accordingly, Applicants request withdrawal of the rejection and allowance of the claims.

**Claims 29-33, 39-42, and 52 Are Novel Over Schwartz et al**

Claims 29-33, 39-42, and 52 are rejected under 35 U.S.C. § 102 (e) as being anticipated by U.S. Patent No. 6,251,143 (Schwartz). The Examiner asserts that Schwartz discloses a membrane having an attachment factor and/or cell cartilage membrane and kit comprising at least one surface part carrying a composition comprising at least one stimulation molecule.

Applicants traverse the rejection. The current claims require “at least one **surface part carrying a composition** comprising at least one stimulation molecule.” Nowhere does Schwartz teach or suggest “at least one **surface part carrying a composition** comprising at least one stimulation molecule.” Rather, Swartz merely discloses a “repair factor releasably **disposed in the insert...**” and “the insert 16 can contain **within the matrix** ‘repair factors’ ....” (Col.4, lines 16-17 and col. 11, lines 10 –11, respectively). Disposed **in** or **within** is not **on the surface** as required by the current claims. Thus, the structure taught by Schwartz is different than what is required by the claims. Accordingly, Applicants request withdrawal of the rejection and allowance of the claims.

In view thereof, reconsideration and withdrawal of the rejections are requested. See, for instance, *In re Marshall*, 198 USPQ at 346 (“rejections under 35 USC 102 are proper only when the claimed subject matter is identically disclosed or described in the prior art.”).

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### CONCLUSION

Applicants submit that all claims are allowable as written and respectfully request early favorable action by the Examiner. If the Examiner believes that a telephone conversation with Applicants' attorney would expedite prosecution of this application, the Examiner is cordially invited to call the undersigned attorney of record. Please charge any additional fees that may be due to Deposit Account No. 04-1105.

Respectfully submitted,

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